

## REMARKS

Since the office action made the rejection of the pending claims final, consideration of this response pursuant to the expedited procedure for response after final rejection set forth at 1059 OG 19-20 respectfully is solicited. Applicant submits the arguments presented herein demonstrate the patentability of all rejected claims.

In the Final Office Action, the Examiner indicated that claims 10-12 were allowable (for which the Applicants express their appreciation), if amended to change their dependency. Otherwise, however, the Final Action continues the rejection of Claims 1-9 and 13 pending in the application.

All claims under rejection depend from Claim 1. Claim 1 has been rejected based on 35 U.S.C. §103(a) as being unpatentable over Kim *et al*, U.S. Patent No. 5,648,225 ("Kim") in view of Loken *et al*, U.S. Patent No. 5,047,321 ("Loken"). For the reasons presented below, however, reconsideration and withdrawal of the rejection respectfully is solicited.<sup>1</sup>

In this response after final, Applicants continue to reiterate their central contention: i.e., that neither Kim, nor Loken, taken together or separately, disclose all of the elements of Claim 1, nor provide any motivation, teaching or suggestion supporting their combination, and therefore do not render this claim obvious or render obvious the remaining dependent claims presently under rejection.

Although Applicants believe that the cited patents fail to disclose many features of Claim 1, in this brief response, Applicants wish to point out and focus on just one specific

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<sup>1</sup> Claims 4 is rejected under 35 U.S.C. §103(a) as being unpatentable over Kim and Loken, and further in view of U.S. Patent No. 5,298,426 issued to Inami, *et al*. ("Inami"). As this claim is also dependent from Claim 1, demonstrating the allowability of Claim 1 shall, *ipso facto*, also demonstrate the patentability of Claim 4.

portion of Claim 1, that is lacking in the disclosures of both cited patents, and which portion Applicants believe the Examiner has not heretofore fully considered or discussed.

In part, Claim 1 recites:

**“(v) plotting the nucleotide fluorescent signal and the fluorescent labeled antibody signal in two coordinate axes to obtain a two dimensional distribution chart discriminating between erythroblasts and leukocytes in the hematologic sample based on the difference in the two-dimensional distribution chart and counting the erythroblasts.”**

(See Claim 1, as amended in the Response to Office Action dated October 13, 2000, *emphasis added*).

This step, along with its recited limitations, is demonstrably lacking in both Kim and in Loken. Neither discloses using two fluorescent signals plotted in coordinate axes to chart a distribution for discriminating and for counting erythroblasts. That they do not disclose this compels withdrawal of the rejection.

As the Examiner has already acknowledged, Kim entirely fails to disclose discriminating erythroblasts by reference to a nucleotide fluorescent signal (See Paper 30, Page 4). Kim discloses a two dimensional chart of side scatter signals (SSC) and a nucleic fluorescence (FL3) (See Kim, Figure 3(a)) for discriminating chicken erythrocyte nuclei, and two dimensional charts plotting antibody fluorescence for gated lymphocytes (FL1 and FL2) (See Kim, Figures 4a-4d, 5a-5h). Kim, however, also does not disclose, teach or suggest plotting nucleic signal fluorescence against antibody signal fluorescence, nor does Kim disclose, teach, or

suggest discriminating and counting erythroblasts based on any two-dimensional distribution chart.

Loken likewise fails to disclose use of a two dimensional chart plotting nucleic fluorescence against antibody fluorescence to differentiate and to count erythroblasts. Loken discloses a two dimensional chart, Figure 5(c), plotting thiazole-orange fluorescence against fluorescent CD-45 expression, but Figure 5(c) is not used, disclosed, or referenced in connection with any discrimination or counting of erythroblasts (See Loken, Column 10, line 67-Column 11, line 5).

Moreover, while the chart at Figure 4(b), which plots orthogonal light scatter against fluorescent CD-45 expression, is disclosed as part of an effort to identify and make “differential morphological counts” of nucleated cells (Loken Column 9, lines 50-53), not the discrimination or counting of erythroblasts. In addition, such chart does not meet the limitations of Applicants’ claim (wherein two fluorescent signals are plotted), and does not clearly differentiate cell groups containing erythroblasts (which are encompassed only generally in Table 1 as “erythroid,”) from other painted populations, let alone allow their counting (See Loken Column 10, lines 13-37).

Given the lack of any disclosure in either Kim or Loken of the limitation recited in step (v) of Claim 1, among other deficiencies in Kim or Loken demonstrated previously by Applicants, the disclosure, teachings and suggestions of these cited patents fail to render Claim 1 obvious. In order to establish a *prima facie* case of obviousness the references cited must teach every element recited in the claims and identify the necessary motivation to combine these elements. In re Rouffet, 149 F. 3d 1350; 47 USPQ2d 1453 (Fed. Cir., 1998). Kim and Loken,

taken together or separately demonstrably do not meet this requirement, even if they did somehow “suggest the desirability of the combination” that is claimed. See MPEP 2143.01 at 2100-110, 111 and MPEP 2145 (j) 3 at 2100-127, which they do not.

Moreover, Applicants submit that neither Kim nor Loken seek to use two dimensional plotting charts to discriminate **and** to count erythroblasts. They cannot be said to motivate this result. Statements with regard to relevant skill in the art do not suffice to “bridge over gaps in substantive presentation of an obviousness case.” Al-Site Corp. v. VSI International, Inc., 174 50 USPQ2d 1161 (Fed. Cir. 1999). It is therefore respectfully submitted that the cited patents fail not only to disclose or teach each element of the Applicant’s claims, they also fail to provide the requisite suggestion *to do* what the applicants have done. As such, the rejection of Claim 1, and of all other dependent claims subject to rejection, is insufficient as a matter of law. Ex parte Levengood, 28 USPQ2d 1300, 1301-02 (BPAI 1993).

Furthermore, no teaching, suggestion or disclosure in Kim or Loken supports the proposed amalgamation of the steps, including use of the dyes and the reagents they respectively disclose, together in a single method. For one, Kim is directed to whole blood samples, (with chicken erythrocyte nuclei) and the process is disclosed as “useful for certain veterinary applications” (Kim, Column 8, lines 51-55). Loken, meanwhile, discloses undertaking a morphological count of nucleated cells (based on side scatter signals and one fluorescent signal) only in connection with a differential analysis of normal bone marrow cells (Loken, Columns 9-10). There is no indication in the cited patents, or otherwise of evidence in the record, that the process of Kim would be compatible with the process or parameters disclosed in Loken so as to achieve the results of what the Applicants have claimed, or, indeed, that any interchangeability

between these disclosed methods would occur to one skilled in the art absent undue investigation or experimentation. As such, Kim and/or Loken do not render Claim 1 *prima facie* obvious.

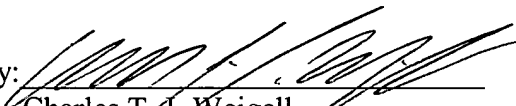
Where Claim 1, the sole independent claim, is clearly patentable, claims 2-9 and 13, all of which ultimately depend from claim 1, and thereby incorporate all limitations of the claim, are also allowable. In re Fine, 5 USPQ2d 1596, 1600 (Fed. Cir. 1988).

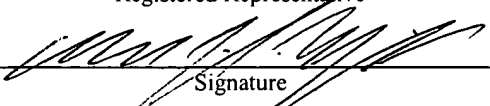
### CONCLUSION

In sum, Examiner has not demonstrated a *prima facie* case of obviousness, therefore, the rejection should be withdrawn. In view of the foregoing, favorable action on the merits, and allowance of all claims, respectfully is solicited.

If the Examiner has any questions regarding this paper, please contact the undersigned attorney.

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